

BRANDON SANDHU

MATHEMATICS GRADUATE

linkedin.com/in/brandonsandhu/

+44 7305 632131

brandonsandhu15@gmail.com

brandonsandhu.com

EDUCATION

MASTER OF MATHEMATICS INTEGRATED MASTERS DEGREE IN MATHEMATICS

UNIVERSITY OF WARWICK.

- Dissertation title: *Combinatorial sieves: methodologies and applications.*
- Number theory, sieve methods, mathematical optimisation.
- Achieved a First Class Honours (82%) at Bachelor’s level; expected First Class Honours for Master’s year.

2021–2025

A*A*A*A* IN A-LEVELS

ST THOMAS MORE SECONDARY SCHOOL

- Mathematics, Further Mathematics, Chemistry and Extended Project Qualification

discussing the bridge between human and artificial intelligences.

2019–2021

EXPERIENCE

QUANTITATIVE RESEARCH JOB SIMULATION

JP MORGAN CHASE & CO.

- Explored and completed a series of 4 summer tasks.
- Developed a predictive model using customer credit data to estimate overdraft probabilities. Conducted pricing analysis for a commodity storage contracts and implemented FICO score bucketing.
- Leveraged Python, SciPy, and financial mathematics for data analysis and modelling.

JULY 2024

MATHEMATICAL RESEARCH PROJECT

UNIVERSITY OF WARWICK.

- Supervised by Dr Simon L. Rydin Myerson
- Title: *On the prime number theorem to results in gaps between consecutive primes*
- Researched the Prime Number Theorem, prime gaps, and alternative elementary proofs. Produced a 46 page essay.
- Delivered a 30-minute presentation on my project to 2 specialised professors.

AUGUST 2023 – APRIL 2024

LEAD FULL-STACK WEB & SOFTWARE DEVELOPER

CONSOLE CONTROLLERS.

- Led a small team to design and launch an e-commerce website for a business concept.
- Boosted ROAS by 22% through strategic keyword optimisation and competitive targeting in Google Ads campaigns.
- Developed a full-scale e-commerce solution from the ground up, utilising MySQL and PHP. Built a search engine and analysed sales data for future optimisation.

JUNE 2021 – PRESENT

ADDITIONAL SUMMER RESEARCH PROJECTS

DESIGNING AND IMPLEMENTING A HIDDEN MARKOV MODEL TO PREDICT STOCK PRICES.

JULY 2024

- Markov chains, expectation-maximising algorithms, model optimisation.

DESIGNED A TRADING STRATEGY USING STOCHASTIC AND MOVING AVERAGE INDICATORS.

AUGUST 2023

- Data science, python, statistics and probability.

PREDICTING COVID-19 HOTSPOTS USING TWITTER API.

JULY 2020

- Created predictive hotspot maps by scraping 50,000+ COVID-19 tweets with semantic analysis.
- Achieved a successful 2-3 day lead time in predicting spikes before they occurred.
- Applied TensorFlow in Python alongside custom data scraping algorithms for Twitter to conduct data analysis, utilising SQLite for efficient data storage.

HOBBIES

Football: Actively play in 7-a-side competitions and engage in casual matches.

Coding: Recently developed a real-time game server for a childhood MMO using Node.js as a passion project. Managed a Discord community with over 1,500 members.

SKILLS

Programming Languages: Python, MySQL, PHP, Node.js, JavaScript, C#. Data Analysis Tools: MATLAB, SciPy, Pandas, NumPy. Data Visualization: Matplotlib, Seaborn, Tableau, Plotly. Mathematical Modeling: Numerical Methods, Optimization, Simulation. Communication: Team Leadership, Task Management, Project Coordination.